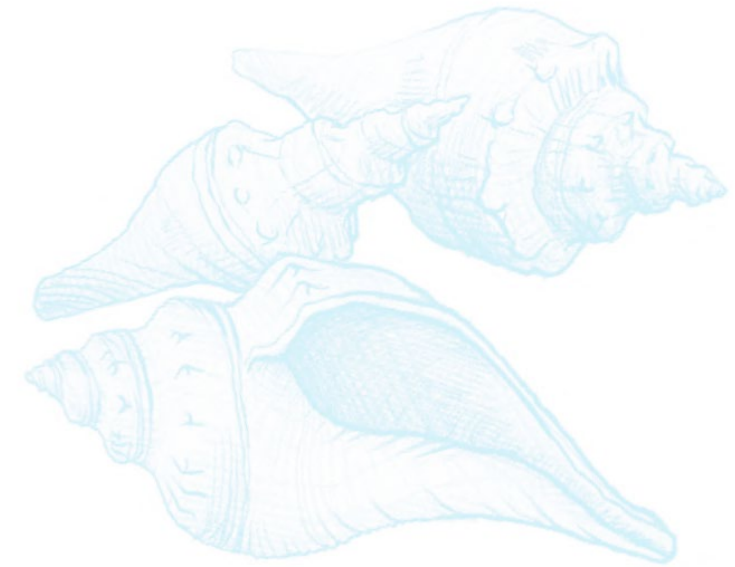


Management Options



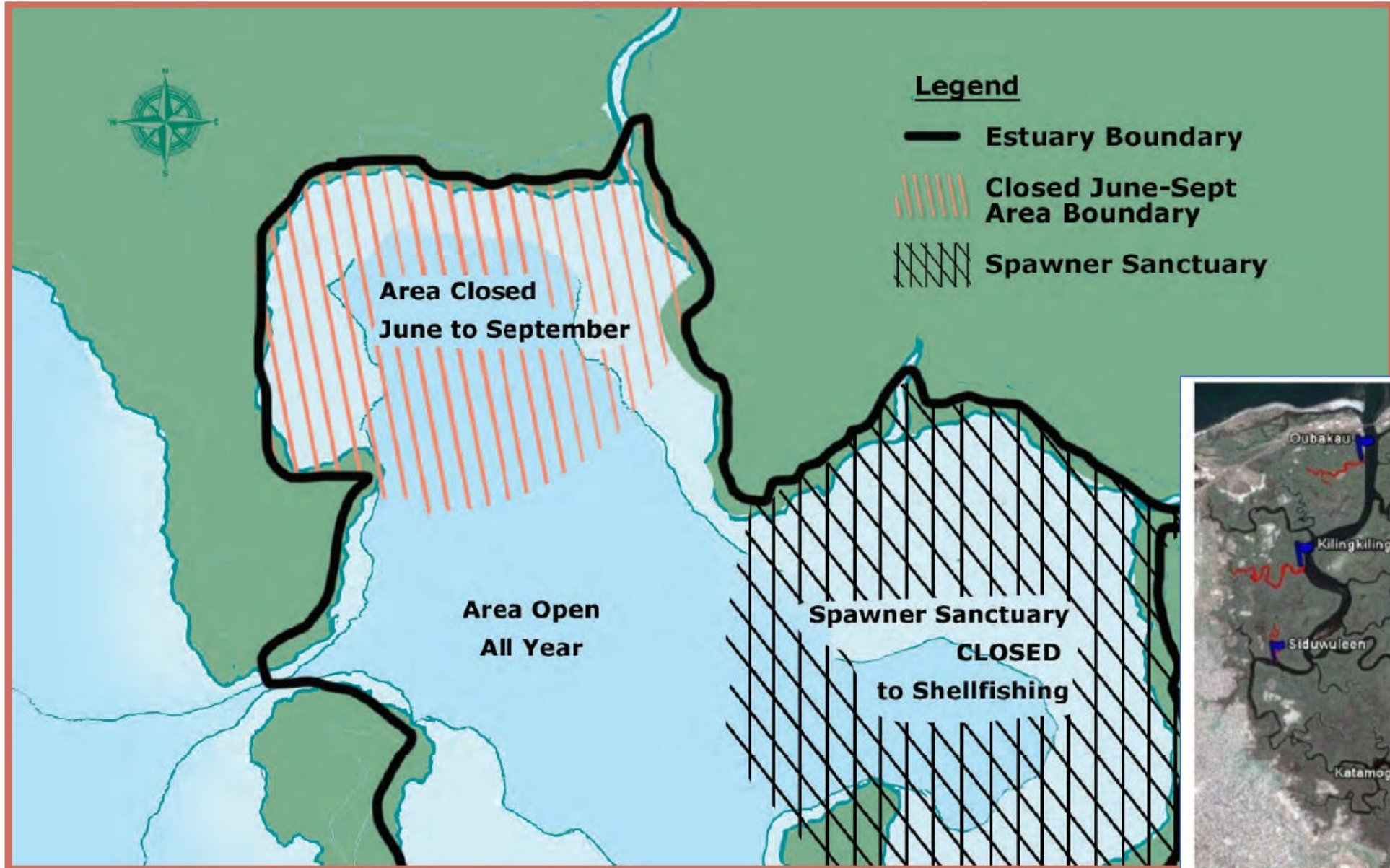
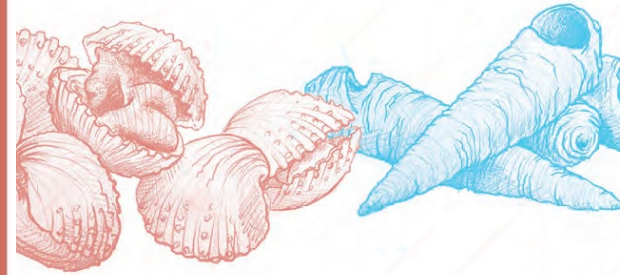
The choice of management measures should be decided by the harvesters themselves but can be guided with technical support provided from external institutions



Management Options

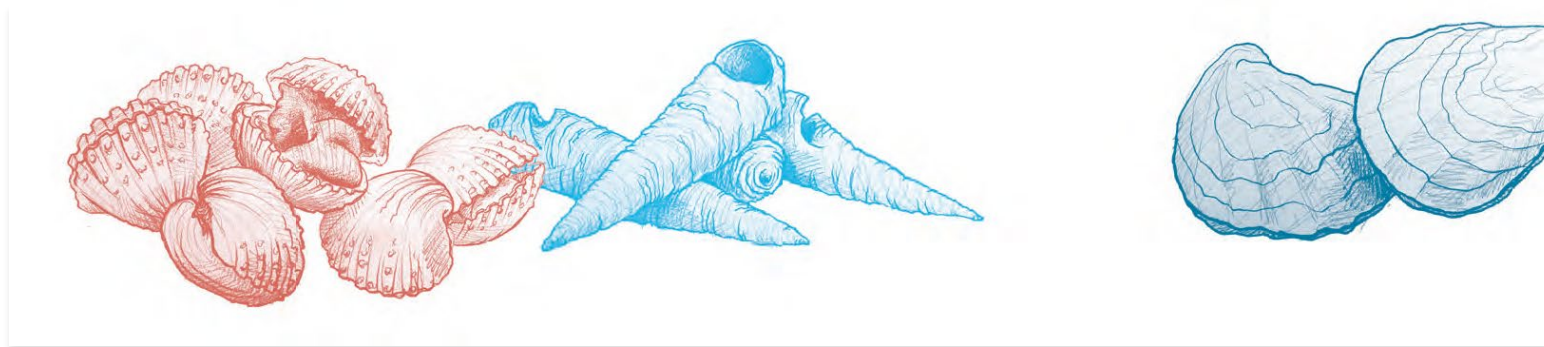
Closed seasons and closed areas





Management Options

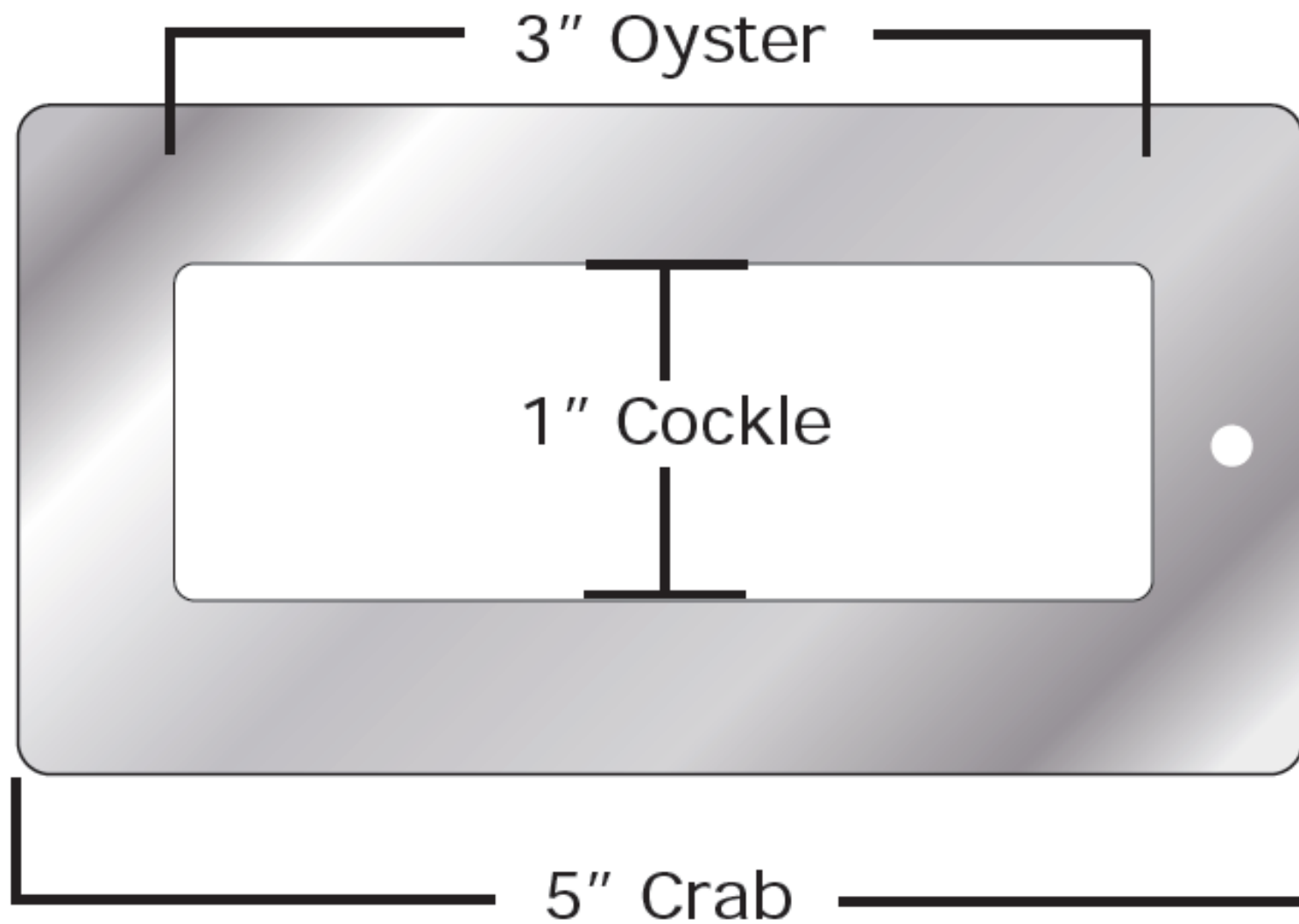
- Size limits
 - Tanbi Plan, The Gambia = 6cm oysters
 - Densu Plan, Ghana = 7cm oysters
- Gear restrictions
- Daily quotas
- Limiting days allowed for fishing
- Restricted access and licensing



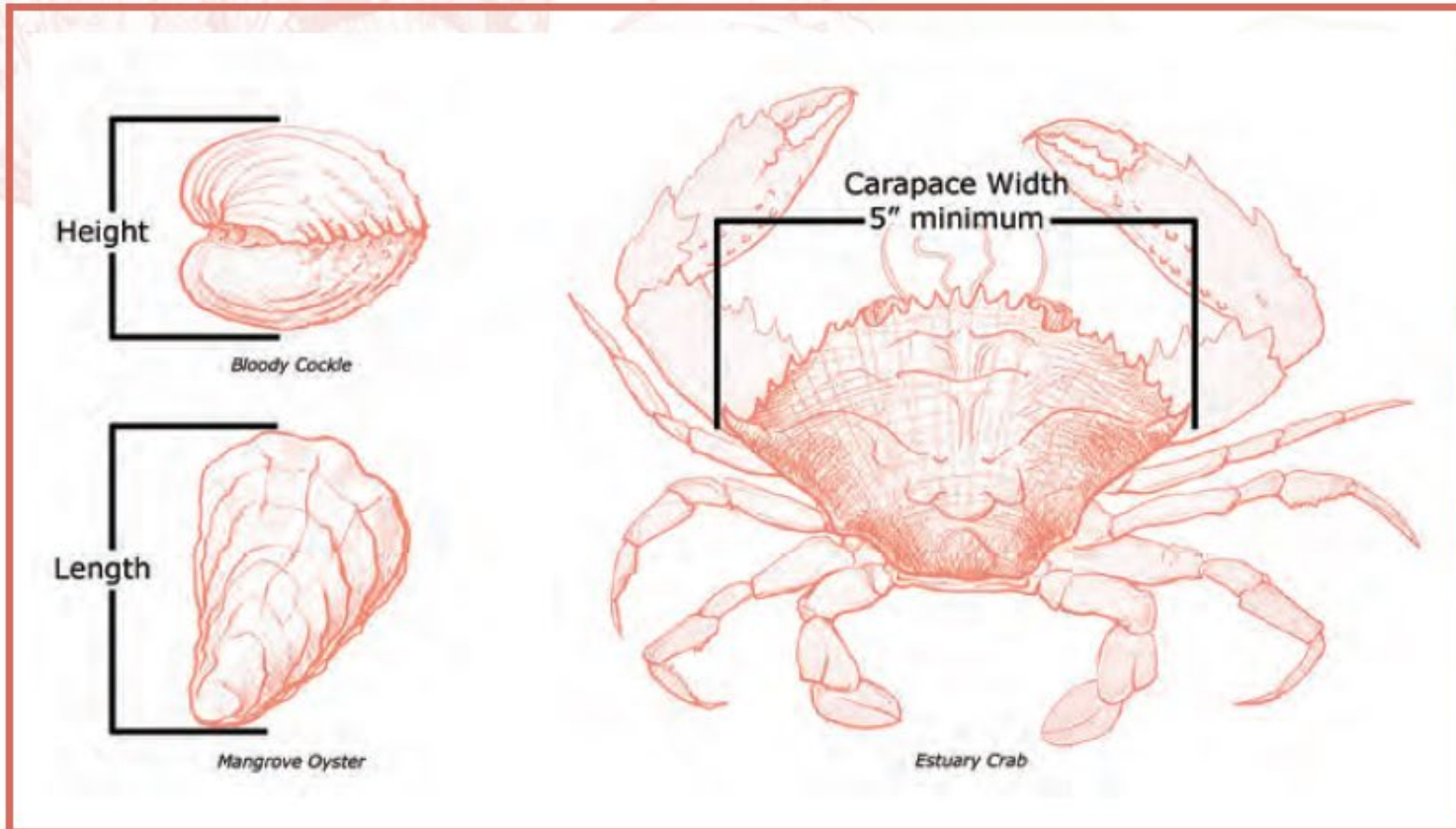
Daily quota



Gear restriction



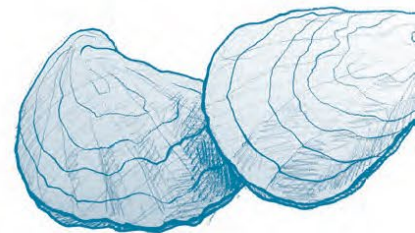
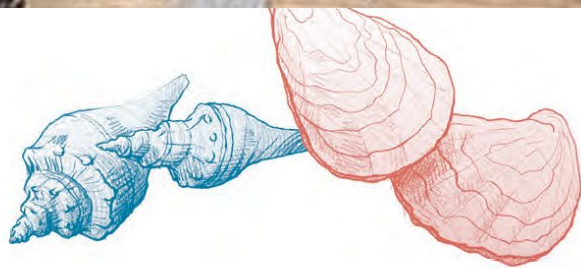
How to measure shellfish and crabs



Management Options

- Habitat protection and restoration
 - Mangrove conservation and protection
 - Oyster reef restoration
 - Water quality monitoring and protection





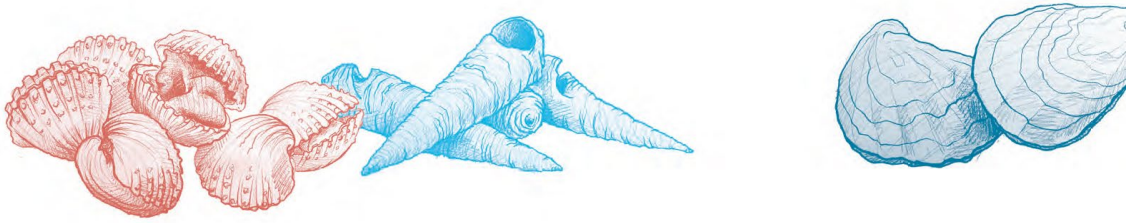
Management Options

- Productivity enhancements
 - Aquaculture
 - Hatcheries
 - Transplanting spat or juveniles



- Leasing or licensing of harvesting or aquaculture areas





Management Options

- Promoting public health
 - Oyster consumption as part of a healthy and diversified diet.
 - Shellfish sanitation programs
 - Cautionary concerning contaminants



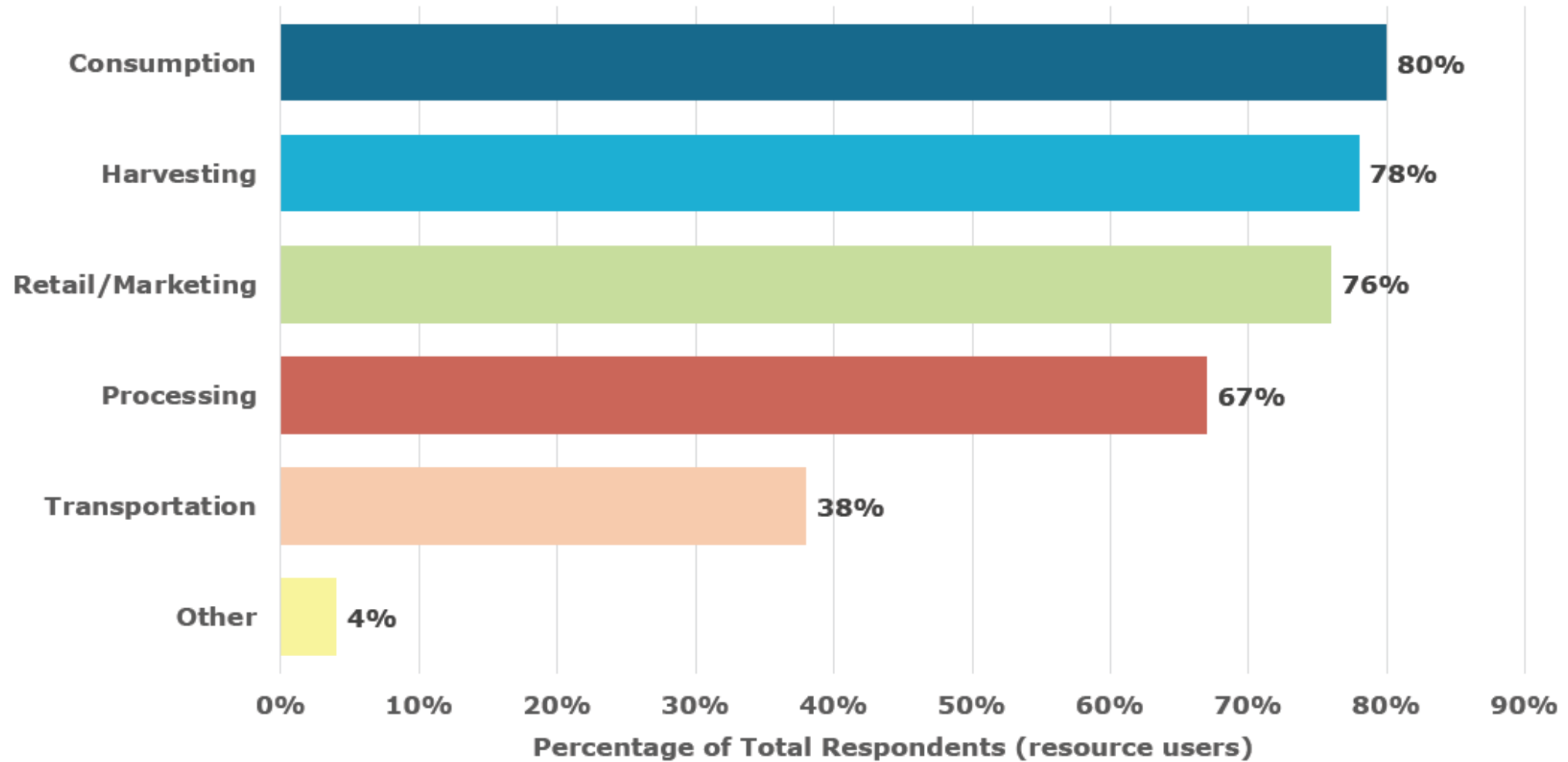


Figure 34: Resource Users' Involvement in the Shellfisheries Value Chain in West Africa
(Source: Chuku, et al., 2021)

Management Options

Post harvest improvements

- Improved handling practices
- Improved processing facilities
- Branding and marketing

Principles

- Gender sensitive
- Market development only with sustainable management of the resource.





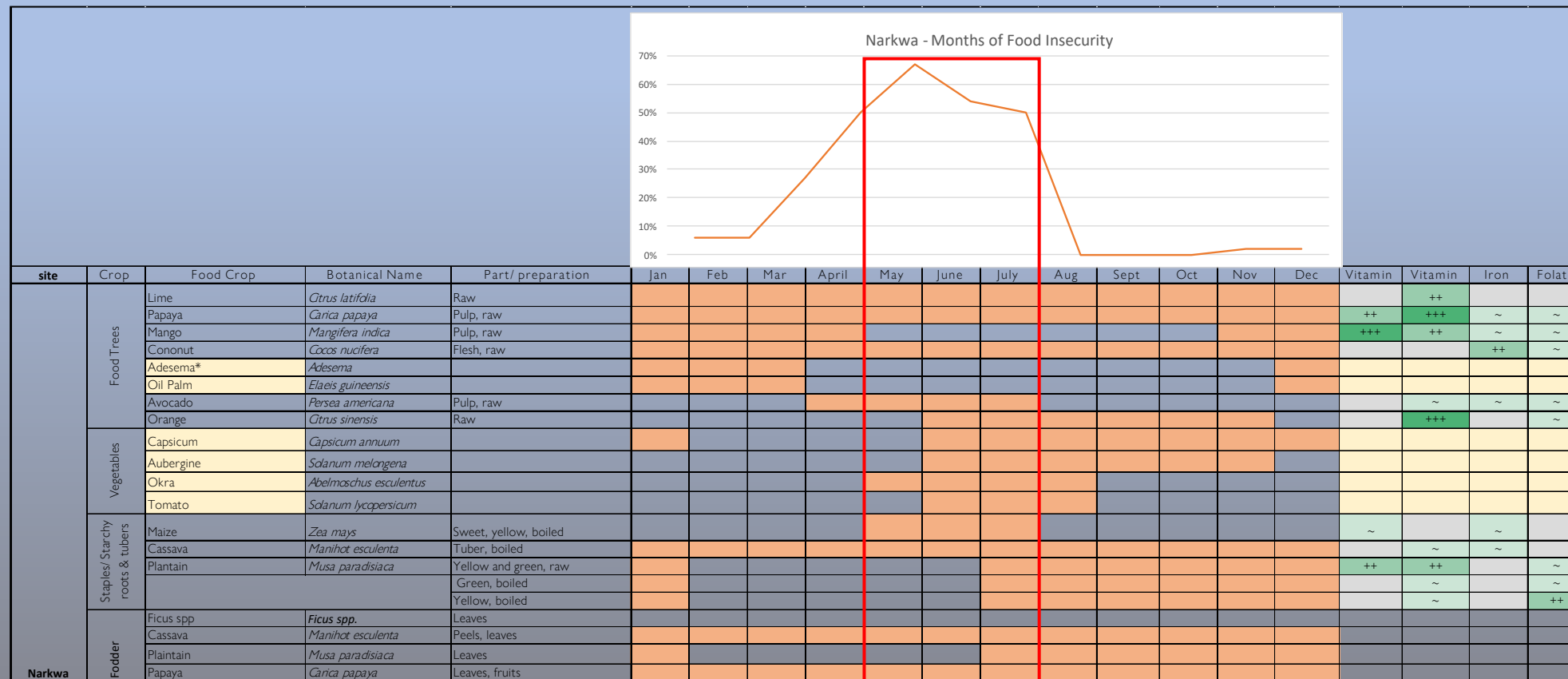
Promoting Integrated Approaches

Diversified livelihoods

- Alternative livelihoods in open access fisheries \neq fewer fishers
- Diversify income and food sources to reduce pressure and increase resilience
- Focus on youth/next generation
- Prioritize general skills development
(numeracy, literacy, business)
- Improve existing supplemental livelihoods
(i.e., Shells for poultry feed input, construction, lime)



Nutritious Food Tree and Crop Portfolios Promoting Diversity



← food harvest mapped against months of food insecurity

← addressing nutrient gaps, matched with nutritional value (Vits. A & C, iron, folate)

← Selected based on ecological suitability, seasonality, community priorities

← supply of diverse foods/nutrients (direct) & income - surplus \ high value crops (indirect)

Orange	Months of harvest	
+++	High source	
++	Source	
~	Present but low source	
Grey	Not a source	
Yellow	Data compilation on-going	

Carefully designed **portfolios** combining food trees - those that supply fruits, nuts, leaves, etc. - with vegetable, pulse and staple crops to address seasonal gaps and micronutrient deficits

Promoting Integrated Approaches: Diversified food production systems

Micronutrient-rich crops like fruits and vegetables are often lacking and highly season-dependent, low purchase

Local, contextually relevant solutions are needed

Step 1. Food Production Diversity

Use of agricultural and wild biodiversity

- Food/fodder production diversity
- +++Indigenous (underutilised)

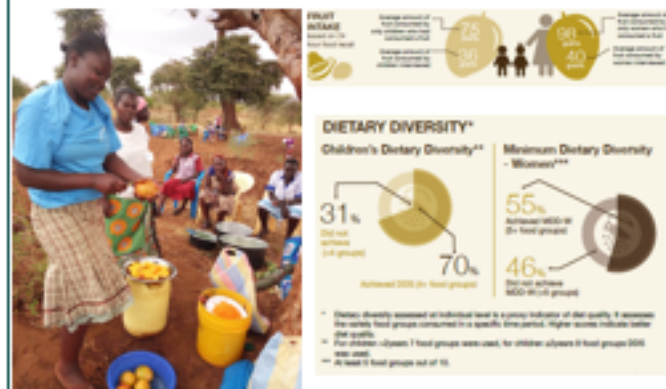
→ Food security



Step 2. Food Consumption Diversity

Food consumption, diet diversity

- Dietary recalls
- Dietary Diversity Score
- Micronutrient intake



Step 3. Priority Setting

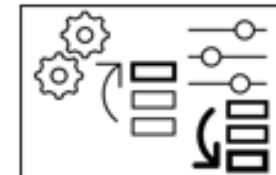
Prioritise agricultural and wild biodiversity for food, income; seasonal food harvest calendars



i. Species Diversity ii. Functional Uses



iii. Opps. & Challenges iv. Ranking



Discussion

